

IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A wireless communication system ~~for performing~~ including wireless units at least some of which are configured to perform data information transmission with during a predetermined data communication period portion of a predetermined transmission frame period and to perform a distance measurement between particular wireless units during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion, wherein~~[[:]~~, during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion,

a first wireless unit transmits a ranging signal to a second wireless unit,
said second wireless unit receives the ranging signal and responds thereto by transmitting ~~returns~~ a response signal to said first wireless unit after a lapse of a predetermined delay period ~~since~~ after said second wireless unit receives the ranging signal, and

said first wireless unit receives the response signal from the second wireless unit and measures a distance between said first wireless unit and said second wireless unit according to ~~a propagation time between said first wireless unit and said wireless second unit, said propagation time being obtained from~~ an elapsed time ~~since measured from when said first wireless unit transmits the ranging signal until the first wireless unit receives the response signal from the second wireless unit.~~

2. (Currently Amended) A wireless communication system ~~for performing~~ including wireless units configured to perform data information transmission with during a

predetermined data communication period portion of a predetermined transmission frame period and to perform a distance measurement between particular wireless units during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion, the wireless communication system comprising:

a local wireless unit including a ranging-signal transmission means for transmitting a ranging signal to a specific remotely located wireless unit in said wireless network during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion[[,]];

response-signal reception means in the local wireless unit for receiving a response signal from said remotely located wireless unit ~~after a lapse of a predetermined period since the ranging signal is transmitted;~~ and

distance measurement means in the local wireless unit for measuring a distance therefrom to said remotely located wireless unit according to ~~a propagation time obtained from an elapsed time from a moment, at which when the ranging signal is was~~ transmitted[[,]] to a moment ~~at which when~~ the response signal is was received.

3. (Currently Amended) A wireless communication method ~~for performing a distance measurement between at least two wireless units in a wireless network in which the wireless units exchange data information transmission with~~ during a predetermined data communication period portion of a predetermined transmission frame period, the wireless communication method comprising the steps of:

transmitting a ranging signal from a local wireless unit to a specific a remotely located wireless unit in said wireless network during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion;

receiving a response signal from said remotely located wireless unit indicating receipt

of the ranging signal by the remotely located wireless unit during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion after a lapse of a predetermined period since the ranging signal is transmitted;
and

measuring ~~[[a]]~~ the distance from said local wireless unit to said terminal remotely located wireless unit according to a ~~propagation time obtained from~~ an elapsed time from a moment~~[[,]] at which~~ when the ranging signal is transmitted~~[[,]]~~ to a moment ~~at which~~ when the response signal is received.

Claim 4 (Canceled).

5. (Currently Amended) The wireless communication method according to claim 3, wherein the ranging signal ~~to be transmitted in said step of transmitting a ranging signal~~ consists of a single pulse signal or of a plurality of pulse signals.

6. (Currently Amended) The wireless communication method according to claim 3, wherein in said step of ~~performing an operation of~~ receiving the response signal from said remotely located wireless unit~~[[,]]~~ includes enabling a reception gate is ~~enabled~~ after a lapse of an image elimination period~~[[,]]~~ which is having a predetermined duration necessary for masking an image due to reflection of waves from an unintended object~~[[,]]~~ ~~and/or a lapse of a ranging delay time including a delay time caused in a signal processing in said wireless unit, in addition to a two-way propagation time of a pulse propagating between wireless units at a propagation velocity.~~

7. (Currently Amended) A wireless communication device ~~for performing~~ configured

to perform data information transmission with communication during a predetermined data communication period portion of a predetermined transmission frame period and to provide a response to a ranging signal received from another wireless communication device during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion, the wireless communication device comprising:

ranging signal reception means for receiving ~~[[a]]~~ the ranging signal from ~~[[a]]~~ the another wireless unit of a wireless network communication device during the ranging period portion of said predetermined transmission frame period; and

response signal transmission means for transmitting a response signal during the ranging period portion of said predetermined transmission frame period indicating reception of the ranging signal ~~after a lapse of a predetermined time since~~ after receiving the ranging signal is received.

8. (Currently Amended) A wireless communication method for performing wireless data communication during a predetermined data communication period portion of a predetermined transmission frame period and for providing a response to a ranging signal received during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion in a wireless network, the wireless communication method comprising the steps of:

receiving ~~[[a]]~~ the ranging signal from a wireless unit of said wireless network during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion; and

transmitting a response signal during the ranging period portion of said predetermined transmission frame period ~~after a lapse of a predetermined time since~~ after receiving the ranging signal is received.

Claim 9 (Canceled).

10. (Currently Amended) The wireless communication method according to claim 8, wherein ~~in said step of transmitting a response signal~~[[,]] the response signal consisting of a single pulse signal or of a plurality of pulse signals ~~is transmitted~~.

11. (Currently Amended) The wireless communication method according to claim 8, wherein ~~in said step of performing an operation of transmitting a response signal~~[[,]] the response signal ~~consisting~~ consists of a sequence of a plurality of PN-coded pulse signals.

12. (Currently Amended) The wireless communication method according to claim 8, wherein in said step of ~~performing an operation of~~ transmitting [[a]] the response signal during the ranging period portion of said predetermined transmission frame period[[,]] ~~the response signal to be sent from said wireless unit is transmitted~~ performed after a lapse of an image elimination period[[,]] ~~which is~~ having a predetermined duration necessary for masking an image due to reflection of waves from an unintended object[[,]] ~~and/or a lapse of a ranging delay time including a delay time caused in a signal processing in said wireless unit, in addition to a two-way propagation time of a pulse propagating between wireless units at a propagation velocity.~~

13. (Currently Amended) A computer program stored in a computer readable storage medium ~~described~~ in a computer-readable form ~~in such a way as to execute an operation, which causes~~ and configured to cause a wireless unit in a wireless network to perform information transmission ~~with~~ during a predetermined data communication period portion of

a predetermined transmission frame period and to perform a distance measurement between wireless units in the wireless network during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion, on a computer system[[,]] comprising the computer program causing the distance measurement between wireless units in the wireless network during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion by controlling the steps of:

performing an operation of transmitting of a ranging signal to a specific wireless unit in said wireless network;

performing an operation of receiving a response signal from said specific wireless unit indicating receipt of the ranging signal by the specific wireless unit after a lapse of a predetermined period since the ranging signal is transmitted; and

measuring a distance to said ~~terminal~~ specific wireless unit according to a propagation time obtained from an elapsed time from a moment[[,]] ~~at which~~ when the ranging signal is transmitted[[,]] to a moment ~~at which~~ when the response signal is received.

14. (Currently Amended) A computer program stored in a computer readable storage medium described in a computer-readable form in such a way as to execute an operation, which causes and configured to cause a wireless network to perform wireless communication including data information transmission during a predetermined data communication period portion of a predetermined transmission frame period and to perform transmission of a ranging signal from one wireless unit in the wireless network to a receiving wireless unit during a ranging period portion of said predetermined transmission frame period separate from the data communication period portion, on a computer system[[,]] comprising the computer program causing the receiving wireless unit to perform the steps of:

receiving [a] the ranging signal transmitted from [[a]] the one wireless unit of said wireless network during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion; and

transmitting a response signal to the one terminal indicating receipt of the ranging signal during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion ~~after a lapse of a predetermined time since the ranging signal is received.~~

15. (New) The wireless communication method according to claim 3, wherein said response signal being received during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion includes a lapse of a ranging delay time including a delay time caused in a signal processing in said remotely located wireless unit, in addition to a two-way propagation time of a pulse propagating between wireless units at a propagation velocity.

16 (New) The wireless communication method according to claim 8, wherein said transmitting step of the response signal during the ranging period portion of said predetermined transmission frame period separate from the data communication period portion occurs after a lapse of a ranging delay time including a delay time caused in a signal processing in said remotely located wireless unit, in addition to a two-way propagation time of a pulse propagating between wireless units at a propagation velocity.

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